



The quality of your PC's case will determine how stable your computer is, how quietly it runs and even how long your components last. We test 18 of the models designed to keep your system covered



On the Case!

If you've built your own PC, you'll know how tempting it is to spend most of your budget on the fastest components, so there's hardly any left for the case. This isn't wise: a poor case can make constructing your PC a nightmare, turning even simple jobs such as installing a DVD drive into a struggle. Worse still, a poor case can damage your computer. An inadequately ventilated case will make your PC's components hotter, shortening their lifespan. Poor-quality cases are often noisy too, which means your PC will be an annoyance whenever it's turned on. Here we show you what to look for when buying a case and advise you on which cases offer the cleverest cooling, the quietest computing and the best build quality.



CHOOSING A... PC CASE

PC cases conform to standard shapes referred to as form factors. These standards help you choose a case that fits your motherboard. They include Mini-ITX, microATX, ATX and, recently, BTX. However, few BTX cases have yet to hit the market.

The Mini-ITX standard is for very small PCs, and accommodates a motherboard that measures just 170x170mm. It's ideal if you want an unobtrusive media PC for your living room. Mini-ITX cases can't be used with the fastest processors, though. Out of curiosity we ran our heat-extraction test, which simulates a hard-working desktop processor, on one Mini-ITX case. It raised the temperature inside the case by a worrying 13°C.

The microATX and ATX standards are the most common and have been around for years. Almost every PC that comes in a tower case conforms to one of these two standards. MicroATX cases are smaller and make a compact system, but you can fit fewer drives and expansion cards. You'll need a microATX motherboard in a microATX case so make sure there's one that meets your needs. MicroATX and ATX motherboards fit in ATX cases.

SUPPLY AND DEMAND

Many cases include a power supply, though these can be bought separately. If you're just building a

basic system for surfing the web and typing letters, your components won't be that power-hungry, so a case with an expensive 400W power supply would be a waste of money. If, however, you've bought a powerful processor and graphics card along with lots of optical drives, you should get a case with a power supply rated at 350W or above. For its most powerful graphics card, the GeForce 6800Ultra, nVidia recommends a 500W power supply.

CASE IN POINT

If you're using such powerful components, you should get one of the latest power supplies with two 12V rails, conforming to the new ATX 2.2 specification. Instead of connecting to your motherboard using a 20-pin connector, ATX 2.2 power supplies have 24-pin connectors. One of the extra pins supplies the second 12V rail, providing the extra current necessary for a powerful PCI Express graphics card. Motherboards equipped with PCI Express slots should have a 24-pin power connector as standard. You can still use an older 20-pin, single 12V rail power supply with these boards, but you may find your system unstable and prone to crashes if you plug in a demanding graphics card. The next best thing to an ATX 2.2 power supply is an older power supply with the highest amp rating you can find on the 12V rail.

Most power supplies, whether they have a 20-pin or 24-pin main power connector, also have the extra 12V 4-pin power adaptor required to power the processor's voltage regulator on new Pentium 4 and Athlon 64 motherboards. However, don't try to force this on the four extra pins of the main power connector of a 24-pin motherboard; if the four-pin connector is needed, the motherboard will provide a separate socket for it.

Certain specific components require special power connectors beyond the standard large and small drive connectors. If you want to use Serial ATA (SATA) hard drives or a PCI Express graphics card, look for a power supply with the special power connectors for these (see www.hitachigst.com/hdd/support/cabling/serial.htm and <http://support.intel.com/support/motherboards/desktop/sb/CS-012073.htm>). If your case's power supply lacks

IN THIS REVIEW

ATX CASES

Acousti C6606
Antec Sonata
AOpen H600A
Aries MA Blue/Black Midi Tower
Aries S-07
Cooler Master Centurion 320
Foxconn Diabolic TH-202
Jeantech Apollo JN8005
Jeantech Phong
Queentech RM421
Suntek Acrylic Silver Mini Tower
Yeong Yang YY-5603 Mars

MINI-ITX CASES

Casestronic Travla C158
Chyang Fun 7989 C3S MiniCube
Morex Cubid 3688

MICROATX CASES

Akasa AK-MCHC
Enlight EN-7473
Hiper Media Chassis

the right connectors it's not a tragedy, but you will have to buy extra converters.

The specifications in the PSU Standard row of our table on page 200 list the physical dimensions of the power supply. Most cases take an ATX12V supply, but bear in mind that other shapes exist when buying or upgrading a power supply unit.

QUALITY COUNTS

Cases vary in their noisiness, and also in the ease with which they allow you to install components. Poorly built cases often rattle. Get a case that allows plenty of airflow around your core components, the processor, graphics card and so on, and efficiently channels hot air out of the case. Our heat extraction tests on page 200 show you exactly how much heat is trapped inside each case, and how noisy they are in use.



ATX CASES

REVIEW ATX CASE

ARIES
MA Blue/Black
Midi Tower

RATING ★★★★★

PRICE £19 inc VAT

SUPPLIER Savastore 08716 666600

DETAILS www.savastore.com

You may not like the look of this stylised case, but the MA is sturdy and we were impressed by its build quality. It also stays cool. In our tests, it ran just four degrees hotter than the room it was in, which is impressive for a case with no fans. If you decide to fit any 80mm fans, you'll need to remove the front fascia. This required a bit of force, but it came away cleanly and reattached easily. The only downside is the power supply: 300W might seem sufficient, but it delivers only 15A on the +12V rail. If you're using a high-end graphics card, you'll need between 20A and 30A. Still, you can afford to buy this sturdy case and upgrade to a better power supply if you need one.



FEATURES ★★★★★

ERGONOMICS ★★★★★

PERFORMANCE ★★★★★

SPECIFICATIONS ATX case, 300W PSU, four 5¼" bays, six 3½" bays, two USB, FireWire, mic, headphones ports

REVIEW ATX CASE

ARIES
S-07

RATING ★★★★★

PRICE £19 inc VAT

SUPPLIER Savastore 08716 666600

DETAILS www.savastore.com

On paper, the S-07 looks like a good deal: a case with a 350W power supply for only £24. We were also impressed by how cool and quiet it was. Unfortunately, it is incredibly flimsy. The sides even buckle slightly when you remove them to get inside. Although the power supply has a high power rating, the +12V rail delivers only 16A. You get only four large drive connectors and one small, so once you've installed your optical drives and a couple of hard disks you'll have none left. This might not be a problem for many people, but as the case has space for five hard disks and four CD drives it's a bit daft. To use those bays you'll need another power supply. The power supply cables are also rather short. If you want a cheap, decent case, go for the Aries MA Blue/Black Tower instead.



FEATURES ★★★★★

ERGONOMICS ★★★★★

PERFORMANCE ★★★★★

SPECIFICATIONS ATX case, 350W PSU, four 5¼" bays, seven 3½" bays, no ports

REVIEW ATX CASE

JEANTECH
Phong

RATING ★★★★★

PRICE £36 inc VAT

SUPPLIER www.xcase.co.ukDETAILS www.jeantech.com

Jeantech's Phong may have a funny name, but it's well built and has lots of great features. The Phong is made mostly of steel, so it's admirably solid. There's space for five hard disks and four optical drives, which is more than you're likely to need. You don't get a built-in power supply, but that's no bad thing. Many people, gamers in particular, will want to pick their own. There are two 120mm fans built into the case. Because they're relatively large, these fans don't have to turn very quickly to move enough air. This means they can keep your case cooler with less noise. The Phong case wasn't the quietest on test, but it wasn't noisy. It also includes two controls that let you adjust the speed of the front and rear fans separately. This is a well-built, well-designed case.



FEATURES ★★★★★

ERGONOMICS ★★★★★

PERFORMANCE ★★★★★

SPECIFICATIONS ATX case, no PSU, four 5¼" bays, seven 3½" bays, two USB, mic, headphones ports

REVIEW ATX CASE

COOLER MASTER
Centurion 320

RATING ★★★★★

PRICE £38 inc VAT

SUPPLIER www.savastore.comDETAILS www.coolermaster.com

The Cooler Master Centurion 320 is an attractive case with a distinctive mesh front panel. It's also well designed. Once you've fitted your motherboard you won't need any tools, as there are no more screws used inside. Hard disks and optical drives are held in place by sliding clamps, which work well. The PCI cards are held in place by clips, with one clip for each card. Some cases use one clip for all the cards, which is annoying as all the cards can fall out when you only need to work on one. You get just one 120mm fan with this case, but an 80mm fan is mounted at the front next to the hard disks. There is a fully connected front FireWire port too. Best of all, this case kept very cool, running only 0.7° hotter than the room it was in.



FEATURES ★★★★★

ERGONOMICS ★★★★★

PERFORMANCE ★★★★★

SPECIFICATIONS ATX case, no PSU, five 5¼" bays, five 3½" bays, two USB, FireWire, mic, headphones ports

REVIEW ATX CASE

YEONG YANG
YY-5603 Mars

RATING ★★★★★

PRICE £42 inc VAT

SUPPLIER www.pcnextday.co.ukDETAILS www.yeongyang.com

This case is pleasingly solid. It has two 120mm fan mounts, one of which comes with a fan attached. To get to the second fan mount, you remove the case's plastic fascia. This was easy, which indicates that the case is well designed and well made. It's one of the only cases in this test to include a power supply with a connector to power a SATA disk drive. This means you can plug the latest SATA hard disks straight in without an adaptor. The design isn't screwless, but it comes with a bag of drive rails. Screw these on your 3½" drives, and you can slide drives in and out of the case without the need for screwing and unscrewing. The power supply is rated at 350W, but delivers only 15A on the +12V rail. This aside, it is a great case at a great price.



FEATURES ★★★★★

ERGONOMICS ★★★★★

PERFORMANCE ★★★★★

SPECIFICATIONS ATX case, 350W PSU, four 5¼" bays, six 3½" bays, two USB, FireWire, mic, headphones ports

REVIEW ATX CASE

FOXCONN
Diabolic TH-202

RATING ★★★★★

PRICE £50 inc VAT

SUPPLIER www.gladiatorcomputers.comDETAILS www.foxconnchannel.com

The Diabolic looks like the spawn of an unholy union between Castle Greyskull and a Portaloo. Still, it's a well-constructed case. The fascia is moulded plastic but the rest is tough steel panel, which is perfect for protecting your PC's delicate components. There's plenty of room to work inside and lots of room for any kind of drive, internal or external. Inside the case is a rack of drive rails to fit to the side of your optical drives, making it easier to remove and replace them. There isn't much cooling; there's only a single 120mm fan fitted at the back of the case. There is, however, a funnelled vent over the processor, making heat removal more efficient for this vital component. If you like the design, this is a decent case for the price.



FEATURES ★★★★★

ERGONOMICS ★★★★★

PERFORMANCE ★★★★★

SPECIFICATIONS ATX case, no PSU, four 5¼" bays, six 3½" bays, four USB, FireWire, mic, headphones ports



REVIEW ATX CASE

AOPEN
H600A

RATING ★★★★★

PRICE £56 inc VAT

SUPPLIER www.pcnextday.co.ukDETAILS www.aopen.com

This case comes with a 300W power supply, a single 80mm fan and a good collection of screws and drive rails. It's roomy, so you won't have any problem working in it. It only has one internal 3½" internal drive bay, but this shouldn't be too much of a problem as you can always use one of the floppy drive bays. You'll only run out of room if you want several hard disks as well as floppy disk and memory card readers. The build quality is generally very good. This is a sturdy, solid and rather heavy case. It sits on four feet that raise it up from the ground, allowing air to circulate underneath. Our only criticism is the slightly loose flap that conceals the front ports. It's not particularly pretty, but this is a decent, solid case that will keep all your components well protected and cool.



FEATURES ★★★★★
ERGONOMICS ★★★★★
PERFORMANCE ★★★★★

SPECIFICATIONS ATX case, 350W PSU, four 5¼" bays, three 3½" bays, two USB, mic, headphones ports

REVIEW ATX CASE

JEANTECH
Apollo JN8005

RATING ★★★★★

PRICE £59 inc VAT

SUPPLIER www.xcase.co.ukDETAILS www.jeantech.com

This is a beast of a case and the biggest on test. It's also one of the heaviest, weighing in at 13.1kg. Fortunately, there are some beautiful things about it too. It's so sturdy that you could almost use it as a bomb shelter. It has three fans, two 120mm and one 80mm, fitted as standard. The 80mm fan is installed in a pop-up panel on top of the case. The ports usually located on the front of a case are also found on top. You can adjust the speed of the fans to suit the demand on your system at any given moment by using the control panel on the front of the case. The Apollo comes with a set of slide rails for your drives and the PCI slots are screwless as well. A power supply is not included, though, so you will have to buy your own.



FEATURES ★★★★★
ERGONOMICS ★★★★★
PERFORMANCE ★★★★★

SPECIFICATIONS ATX case, no PSU, four 5¼" bays, 10 3½" bays, two USB, FireWire, mic, headphones ports

REVIEW ATX CASE

SUNTEK
Acrylic Silver Mini Tower

RATING ★★★★★

PRICE £59 inc VAT

SUPPLIER www.savastore.comDETAILS www.suntekgroup.com

If you've always admired the style of Apple computers, this is the case for you. It looks uncannily similar to a Mac G4, but with the handle on top rather than at the ends. Looking a bit like a Mac is no bad thing; this is easily the best-looking case on test. Its drive bays and PCI slots are all screwless, which will save you time and hassle. There's plenty of room to work inside this case, even with the preinstalled power supply. It has audio ports at the front and two USB ports and a FireWire port all hidden behind a sprung panel. This panel is delicate and breaks off relatively easily, so you'll need to be careful with it. The handle on top of the case also feels surprisingly delicate. For the most part, though, this is a sturdy, well-made and extremely good-looking case.



FEATURES ★★★★★
ERGONOMICS ★★★★★
PERFORMANCE ★★★★★

SPECIFICATIONS ATX case, 300W PSU, four 5¼" bays, five 3½" bays, two USB, FireWire, mic, headphones ports

REVIEW RACKMOUNT ATX CASE

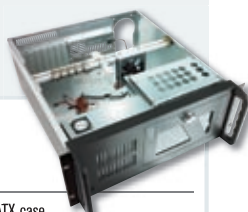
QUEENTECH
RM421

RATING ★★★★★

PRICE £70 inc VAT

SUPPLIER www.xcase.co.ukDETAILS www.queenservers.com

The Queentech is a rackmount case and it's good value. It's heavy, bulky and not particularly pretty, but it is sturdy, roomy and well cooled. In our tests, it was only 3.8° hotter inside the case than in our labs. However, there are only two 3½" drives, so you can't set up huge RAID arrays. The drive bays are cooled by a fan mounted on a rail. This allows the air to be directed to your hard disks from close quarters. There's room for three optical drives, so you won't have trouble fitting multiple drives for disc-to-disc copying. If you want to use it with rackmounted music equipment, this is a fine case to choose. We wouldn't recommend you use it for anything else, though, because it is too heavy and cumbersome.



FEATURES ★★★★★
ERGONOMICS ★★★★★
PERFORMANCE ★★★★★

SPECIFICATIONS Rackmount ATX case, no PSU, three 5¼" bays, two 3½" bays, no ports

REVIEW ATX CASE

ANTEC
Sonata

RATING ★★★★★

PRICE £76 inc VAT

SUPPLIER www.savastore.comDETAILS www.antic.com

Antec's Sonata is an incredibly cool case. After half an hour of testing, the temperature inside had increased by only 0.6°. This was the best result in this test. On the other hand, the case was only fairly quiet. It's a sturdy, tough, steel affair that will withstand knocks and bumps. The power supply is rated at 380W and delivers 24A on the +12V rail. That's the best of all the cases on test with built-in power supplies. The Sonata is also one of very few cases here to have SATA power connectors, and the only case with more than one. The internal 3½" drive bays face side on, so they're easy to get to. Cooling is taken care of by a single 120mm fan. This is a very impressive case, and it is well worth the money.



FEATURES ★★★★★
ERGONOMICS ★★★★★
PERFORMANCE ★★★★★

SPECIFICATIONS ATX case, 380W PSU, three 5¼" bays, six 3½" bays, two USB, FireWire, mic, headphones ports

REVIEW ATX CASE

ACOUSTI
C6606

RATING ★★★★★

PRICE £93 inc VAT

SUPPLIER www.quietpc.com/ukDETAILS www.acoustiproductions.com

The C6606 comes with a tailor-made set of noise-dampening panels. These foam inlays fit into the spaces inside the case. You stick them to the insides of your panels using pre-applied adhesive or tuck them into place. The effect was instantly noticeable; this case was nearly silent. It's the second quietest of the full-size cases on test behind the Aries MA Tower. To get the full benefit of this case, however, you must be good with your hands. Fitting the acoustic panels is fiddly. If you get them out of alignment, your case won't fit together properly and you won't receive the full benefit of the noise-dampening material. Still, a sturdy and well-cooled case with lots of room to work in and enough internal and external drive bays to build your system.



FEATURES ★★★★★
ERGONOMICS ★★★★★
PERFORMANCE ★★★★★

SPECIFICATIONS ATX case, no PSU, three 5¼" bays, two 3½" bays, two USB, FireWire, mic, headphones ports



MINI-ITX CASES

REVIEW MINI-ITX CASE

MOREX Cubid 3688

RATING ★★★★★

PRICE £54 inc VAT

SUPPLIER www.itx-warehouse.co.uk

DETAILS www.procase.com.tw

The Morex Cubid is as big as the average packet of cornflakes. Inside it has a two-tier design. The motherboard screws to the floor of the case and the hard disk and optical drive sit on a metal shelf. You have to remove the shelf to install the motherboard. Once you've done this, it's easy to screw the motherboard into place. There are no obstructions to stop you getting the screwdriver into the case. Installing RAM is fiddly, though, as the DIMM slots sit tight against the built-in 60mm fan. The case was quiet in our noise tests, emitting a third of the volume of the loudest case on test. There's no space inside for add-in cards, so be sure the motherboard you buy has all the functions you need. This is a decent case, but only for stripped-down systems.



FEATURES ★★★★★

ERGONOMICS ★★★★★

PERFORMANCE ★★★★★

SPECIFICATIONS Mini-ITX case, 60W PSU, one 5¼" bay, no 3½" bays, two USB ports

REVIEW MINI-ITX CASE

CHYANG FUN 7989 C3S MiniCube

RATING ★★★★★

PRICE £63 inc VAT

SUPPLIER www.itx-warehouse.co.uk

DETAILS www.chyangfun.com

The Chyang Fun MiniCube looks like a Shuttle-style barebones PC system, but it's smaller and accepts standard Mini-ITX motherboards. It is the only Mini-ITX case that can accommodate a full-size hard disk and optical drive. These components are far cheaper than their notebook equivalents and tend to be faster. There's plenty of room in the case, so it's easy to work in. The motherboard screws to the floor of the case while the optical drive and hard disk fit into trays at the top. You can't run really powerful components in this case, though, as its power supply is rated at only 220W. Also, it isn't the standard size, so you can't swap it easily for another. If you want to create a Mini-ITX PC from components that don't cost the earth, this lets you build one easily.



FEATURES ★★★★★

ERGONOMICS ★★★★★

PERFORMANCE ★★★★★

SPECIFICATIONS Mini-ITX case, 150W PSU, one 5¼" bay, one 3½" bay, two USB ports

REVIEW MINI-ITX CASE

CASETRONIC Travla C158

RATING ★★★★★

PRICE £106 inc VAT

SUPPLIER www.itx-warehouse.co.uk

DETAILS www.casetronic.com

The Travla is wider and flatter than the Morex – it's about the size of a small pizza box but a bit taller. It comes in two configurations: with a slot for a notebook optical drive or without. Both cases allow you to use either a standard or notebook-sized hard disk. You can also use the supplied adaptor to fit a PCI card at 90° to the motherboard. This will be useful if you want to add a surround-sound card to a media centre PC, for example. Despite being wider than the Morex, the Travla feels cramped. To install the motherboard you have to remove the shelf for the optical drive. Even then the cables get in the way, making it hard to fit the optical drive shelf in place. This is generally a well-designed case with good features, but it's a bit cramped and very expensive.



FEATURES ★★★★★

ERGONOMICS ★★★★★

PERFORMANCE ★★★★★

SPECIFICATIONS Mini-ITX case, 120W PSU, one (notebook) 5¼" bay, one 3½" bay, two USB, line in, line out ports

MICROATX CASES

REVIEW MICROATX CASE

HIPER Media Chassis

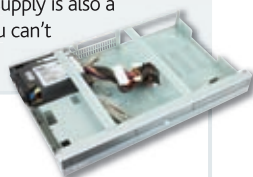
RATING ★★★★★

PRICE £53 inc VAT

SUPPLIER www.xcase.co.uk

DETAILS www.hipergroup.com

The Media Chassis looks as if it belongs in a hi-fi system, and at 430mm it is the same width as most hi-fi separates. If you want to build a music server to plug into your amp, this is the best case on test. It's roomy too. The hard disk and optical drive sit on the left-hand side of the case, one on top of the other. This leaves two thirds of the case free for a microATX motherboard. This type of motherboard can take a desktop processor, so you could turn the Hiper into a powerful PC. Unlike many media server-style cases, this has a built-in power supply. It's not that powerful and is rated at only 200W, so you can't turn this into a games PC. The power supply is also a non-standard size, so you can't replace it easily.



FEATURES ★★★★★

ERGONOMICS ★★★★★

PERFORMANCE ★★★★★

SPECIFICATIONS MicroATX case, 200W PSU, one (notebook) 5¼" bay, one 3½" bays, 4x USB, FireWire (four pin) ports

REVIEW MICROATX CASE

ENLIGHT EN-7473

RATING ★★★★★

PRICE £53 inc VAT

SUPPLIER www.xcase.co.uk

DETAILS www.enlightcorp.com

The EN-7473 is a media server case. It won't fit into a hi-fi stack, however, as it's too narrow. It has been built to look like two DVD players, one stacked on top of the other. This gives you more room inside the case, which is deeper than the other media centre chassis. The case is sturdy and well designed. Fitting the motherboard was no problem, though it did involve removing the cage for the optical drive. Once back in place, this cage leaves little clear space over the memory modules, so adding more memory would be fiddly. The power supply is rated at 200W. This should suffice if you don't want to install lots of fans and a powerful graphics card. If you want a media centre PC, this is decent but a bit noisy.



FEATURES ★★★★★

ERGONOMICS ★★★★★

PERFORMANCE ★★★★★

SPECIFICATIONS MicroATX case, 200W PSU, one 5¼" bay, two 3½" bays, two USB, FireWire, mic, headphones ports

REVIEW MICROATX CASE

AKASA AK-MCHC

RATING ★★★★★

PRICE £64 inc VAT

SUPPLIER www.misco.co.uk

DETAILS www.akasa.com.tw

Transparent cases are an acquired taste. If you don't care what's in your PC as long as it works, the AK-MCHC isn't for you. If you love to tinker with and overclock your system, though, this is the ideal way to show off your handiwork. This case holds the motherboard above the power supply, so it's more visible. It comes flat-packed. Its instruction booklet is clear and easy to follow, though some finishing touches are unexplained. We found it easy to assemble, but be careful not to scratch the panels as they mark easily. The case has three fan mounts: one 60mm and two 80mm. You'll have to provide the fans, though, and the case doesn't contain noise well. Apart from the risk of scratching, this is a sturdy and stylish choice.



FEATURES ★★★★★

ERGONOMICS ★★★★★

PERFORMANCE ★★★★★

SPECIFICATIONS MicroATX case, no PSU, two 5¼" bays, six 3½" bays, two USB, mic, headphones ports

ATX CASES

MANUFACTURER	ARIES	ARIES	JEANTECH	COOLER MASTER	YEONG YANG	FOXCONN	AOPEN	JEANTECH	SUNTEK	QUEENTECH	ANTEC	ACOUSTI
MODEL	MA Blue/Black Midi Tower	S-07	Phong	Centurion 320	YY-5603 Mars	Diabolic TH-202	H600A	Apollo JN8005	Acrylic Silver Mini Tower	RM421	Sonata	C6606
Rating	★★★★	★★	★★★★★	★★★★	★★★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★★★	★★★★
Standard	ATX	ATX	ATX	ATX	ATX	ATX	ATX	ATX	ATX	ATX	ATX	ATX
PSU	300W	350W	None	None	350W	None	350W	None	300W	None	380W	None
PSU standard	ATX12V	ATX12V	ATX12V	ATX12V	ATX12V	ATX12V	ATX12V	ATX12V	ATX12V	ATX12V	ATX12V	ATX12V
Main power connector	20-pin	20-pin	N/A	N/A	20-pin	N/A	20-pin	N/A	20-pin	N/A	20-pin	N/A
4-pin 12V connector	Yes	Yes	N/A	N/A	Yes	N/A	Yes	N/A	Yes	N/A	Yes	N/A
12V rails	1 (15A)	1 (16A)	N/A	N/A	1 (18A)	N/A	1 (15A)	N/A	1 (16A)	N/A	1 (24A)	N/A
Large drive connectors	5	4	N/A	N/A	7	N/A	7	N/A	4	N/A	7	N/A
Small drive connectors	2	1	N/A	N/A	3	N/A	2	N/A	2	N/A	2	N/A
SATA connectors	0	0	N/A	N/A	1	N/A	0	N/A	2	N/A	2	N/A
PCI-Express connectors	0	0	N/A	N/A	0	N/A	0	N/A	0	N/A	0	N/A
80mm fan mounts (fans fitted)	2 (0)	3 (0)	1 (0)	2 (1)	0	0	5 (1)	4 (1)	1 (0)	1 (1)	0	1 (0)
120mm fan mounts (fans fitted)	1 (0)	0	2 (2)	1 (1)	2 (1)	1 (1)	0	2 (2)	0	1 (1)	1 (1)	1 (0)
5 1/4" bays	4	4	4	5	4	4	4	4	4	3	3	3
Internal 3 1/2" bays	4	5	5	4	5	4	1	2	3	1	4	1
External 3 1/2" bays	2	2	2	1	1	2	2	8	2	1	2	1
Front ports	2x USB, 1x FireWire, mic, headphones	None	2x USB, mic, headphones	2x USB, 1x FireWire, mic, headphones	2x USB, 1x FireWire, mic, headphones	4x USB, 1x FireWire, mic, headphones	2x USB, mic, headphones	None	2x USB, 1x FireWire, mic, headphones	None	2x USB, 1x FireWire, mic, headphones	2x USB, 1x FireWire, mic, headphones
Other ports												
Dimensions (HxWxD)	410x210x480	412x185x420mm	403x197x480mm	435x202x480mm	440x211x510mm	431x204x457mm	460x200x460mm	480x210x580mm	453x210x508mm	179x485x479mm	425x207x464mm	485x200x425mm
Weight	6.8kg	4.5kg	8kg	7.8kg	8.9kg	11.7kg	9.8kg	13.1kg	11kg	12.2kg	9.6kg	13.25kg
Price inc VAT	£19	£19	£36	£38	£42	£50	£56	£59	£59	£70	£76	£93
Supplier (www.)	savastore.com	savastore.com	xcase.co.uk	savastore.com	pcnextday.co.uk	gladiatorcomputers.com	pcnextday.co.uk	xcase.co.uk	savastore.com	xcase.co.uk	savastore.com	quietpc.com/uk
Details (www.)	savastore.com	savastore.com	jeantech.com	coolemaster.com	yeongyang.com	foxconnchannel.com	aopen.com	jeantech.com	suntekgroup.com	queenservers.com	antec.com	acoustproducts.com
Part code	10280135	10268334	JNH60	10280125	5063	CATAR-56004	H600A	JN8005	10248394	RM421	10277808	C6606A

MINI-ITX CASES

MANUFACTURER	MOREX	CHYANG FUN	CASETRONIC	HIPER	ENLIGHT	AKASA
MODEL	Cubid 3688	7989 C3S MiniCube	Travia C158	Media Chassis AMD64	EN-7473	AK-MCHC
Rating	★★★★	★★★★★	★★★	★★★	★★★★	★★★★
Standard	Mini-ITX	Mini-ITX	Mini-ITX	microATX	microATX	microATX
PSU	60W (external)	200W	120W (external)	200W	200W	None
PSU standard	N/A	Proprietary	N/A	Proprietary	SFX12V	ATX12V
Main power connector	20-pin	20-pin	20-pin	20-pin	20-pin	N/A
4-pin 12V connector	No	Yes	Yes	Yes	Yes	N/A
12V rails	N/A	1 (16A)	N/A	1 (12A)	1 (16A)	N/A
Large drive connectors	1	3	2	2	4	N/A
Small drive connectors	1	3	3	1	1	N/A
SATA connectors	0	0	0	1	0	N/A
PCI-Express connectors	0	0	0	0	0	N/A
80mm fan mounts (fans fitted)	0	0	0	0	0	2 (0)
120mm fan mounts (fans fitted)	0	0	0	0	0	0
5 1/4" bays	1 (notebook optical drive)	1	1 (notebook optical drive)	1 (notebook optical drive)	1	2
Internal 3 1/2" bays	0	1	1	1	1	4
External 3 1/2" bays	0	0	0	0	1	2
Front ports	2x USB	2x USB	0	4x USB, 1x FireWire (4-pin)	2x USB, 1x FireWire, mic, headphones	2x USB, mic, headphones
Other ports	None	None	2x USB, line in, line out	None		
Dimensions (HxWxD)	65x210x258mm	290x189x167mm	69x323x254mm	53x430x270mm	140x345x350mm	390x185x390mm
Weight	1.7kg	2.25kg	2.3kg	4kg	4.6kg	6.8kg
Price inc VAT	£54	£63	£106	£53	£53	£64
Supplier (www.)	itx-warehouse.co.uk	itx-warehouse.co.uk	itx-warehouse.co.uk	xcase.co.uk	xcase.co.uk	misco.co.uk
Details (www.)	procase.com.tw	chyangfun.com	casetrasonic.com	hipergroup.com	enlightcorp.com	akasa.com.tw
Part code	36888	CF7989C3S	C158B-120	HMC-1553A	EN-7473	AK-MCHC

MICROATX CASES

HOW WE TESTED

To compare the cooling capacity and noise level of each case, we used a custom-designed heating element to deliver the same amount of heat to each case. Powered by each case's own power supply, the heater emits as much heat as a busy modern PC and also exercises the PSU to reach a realistic overall case temperature under tightly controlled conditions. We ran each case for exactly half an hour, allowing the temperature to stabilise and any thermally controlled fans to get up to speed, then measured the case temperature and noise level. To test the sturdiness and usability of each case, we tried fitting a motherboard and other standard components. Each case is rated according to three criteria. Features rates how many drive bays, ports and extras are included. Performance rates how cool the case was in use, and how powerful the power supply is. Finally, Ergonomics scores rate quietness and how easy the case is to work in and use. Each case was given an overall value for money score, based on the average of these three scores and the cost.

LABS VERDICT
PC CASES

Exactly what kind of case you want depends on the sort of computer you want to build. If you want a quiet, small PC for the living room we recommend the Chyang Fun MiniCube. It's not that expensive, it's small and you'll be able to use cheap desktop disk drives. If you're building a standard system and just want a well-priced, decent case that does the job, go for our Best Budget Buy award winner, the Aries MA Blue/Black Midi Tower. It's well built, sturdy, cool and quiet. If you have a bit more money to spend, go for the Yeong Yang YY-5603 Mars. It's screwless, has a SATA connector and doesn't get too hot. It wins our Best Buy award. **CS**

ATX CASE

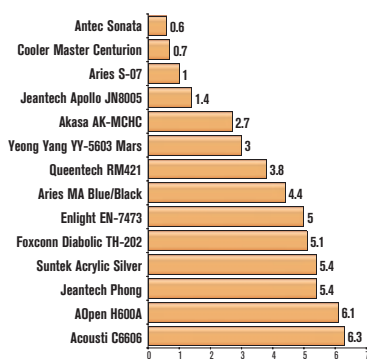
YEONG YANG
YY-5603
Mars

ATX CASE

ARIES
MA Blue/
Black

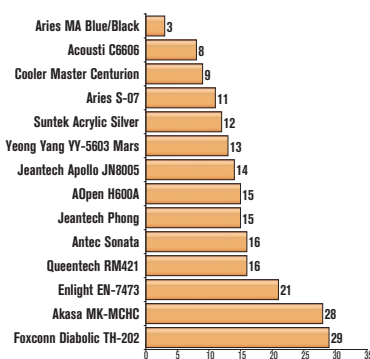
Cooling and noise

Temperature (degrees)



Operating temperatures were measured relative to the ambient room temperature with a constant 40W heat input. Smaller is better.

Noise



Noise was measured at the stable operating temperature with all the case and power supply unit (PSU) fans running. Smaller is better.